RELEASE 1.0

7/8-95 *ESTHER DYSON'S MONTHLY REPORT* JULY/AUGUST 1995

CONSORTIA, STANDARDS BODIES AND OTHER LIFE FORMS

by Jerry Michalski

Standards make markets. Whether they are Official International Standards such as X.25 and MPEG or acknowledged de facto standards such as DOS and Windows, they help vendors decide where to invest development resources and buyers decide which products and vendors to choose.

The standards-making process has recently become more complex and interactive, as well as more important in determining where markets go and who leads them. There are four major sets of players in the standards game. The *traditional standards bodies* know they are too slow and rigid and have begun to reinvent themselves, albeit slowly. *Microsoft* has emerged as the only company that can expect to set standards that others will follow, though it is far from infallible.

Consortia, coalitions and alliances sprout weekly with many motives (including defeating Microsoft), but almost uniformly have speed-to-market at the top of their agendas. Companies that participate in these groups are doing unusual things like sharing intellectual property openly; some of the groups are linking up with each other. And nearly everyone is eyeing the *Internet*, which has more to offer than its quirky but effective standards-setting process. However, few organizations outside of the Internet community seem to appreciate its potential long-term effects; not many have incorporated it into their plans.

Under the macroscope

The standards world isn't exactly chic, but it has become the locus of much useful activity. This issue of **Release 1.0** uses a number of examples, especially in the voice-processing and multiparty conferencing fields, to explore the standards-making process: how it has changed, how it works -- and doesn't -- and where it may be headed. We are especially interested in the delicate balance that most of these players must strike and in how they will affect each other over time.

For example, Microsoft consistently walks a thin line between helping independent developers get rich in Microsoft's slipstream and infuriating them by entering their markets or changing directions unpredictably. In fact, managing this process is one of Microsoft's core competencies. (The other one is cutting great deals ⟹

INSIDE

CONSORTIA, STANDARDS, ETC. 1
Standards make markets.
Microsoft and the Internet.
Lock-in, or get locked out.
A VISIT TO THE FRONT LINES 9
The voice processing world.
OPPORTUNITIES IN CENSORSHIP 14
by Esther Dyson
RESOURCES & CALENDAR 17
Names, phones, dates, tables.

CYBERSPACE: LOVE IT OR LEAVE IT

for itself. Microsoft is a lousy marketing company; its programming is improving, but much of the clunky code it wrote in the past will haunt it for years to come.) Microsoft is second to none in courting, supporting and retaining developers.

Consortia must try to balance their *size* (smaller groups are nimbler and can share confidential information more safely), *credibility* (larger groups can sway markets and are less likely to be fronts for vendors) and *potential advantage* (openness can mean commoditization and lower profits; sharing technology can mean giving up differentiation).

To see all of this in action and make it a bit more concrete, the middle section of this issue visits the voice processing and conferencing markets. The segment ends with some thoughts about openness, intellectual property and organizational change. The issue ends with an essay about market forces and censorship in cyberspace from Esther Dyson.

Because of its subject matter, this issue of **Release 1.0** is chock-full of acronyms, not all of which we spell out on their initial occurrence in the text. Don't worry: They're all in the tables that start on page 18. Also, this is not an exhaustive study, but rather a way to examine what works and what doesn't. We hope any standards bodies left out of this issue won't be offended -- perhaps they will be relieved.

When is a Standard a standard?

Only sanctioned standards bodies such as the International Standards Organization (ISO) and the International Telecommunications Union (ITU) can create a Standard with a capital "s." The global telecommunications infrastructure we take for granted works as well as it does because of the patient efforts of ITU members. The less regulated, less mature computer industry doesn't have as many official standards.

Of course, not all profitable businesses are built atop official Standards. In fact, complying with the worst of those standards can easily kill a business and has brought many markets to the brink of failure.

Often industries rise and fall around standards that are never made official at all. Typically, they are proprietary protocols, formats and architectures from dominant vendors. Their proprietary nature usually catches up with them in the end.

Big Green

Microsoft may be able to set standards unilaterally, but it does so carefully, and it fails on occasion, despite its best efforts. Two years ago, for example, it launched an initiative it called Microsoft At Work (named before the @ sign became popular), which attempted to set standards for the way office devices such as faxes, printers and copiers would operate and communicate with each other and with PCs and PDAs. Although At Work addressed an important business need, it did so by forcing an operating system and user interface on a half-dozen industries that were otherwise doing quite well, thank you, and weren't that enthusiastic about turning their futures over to Microsoft. Other efforts have recently emerged to promote similar ideas framed in a less threatening way (see box, opposite).

Putting machines to work

When Microsoft announced its At Work architecture, the world of conventional office machines seemed about to be transformed forever. Just about every name in the business was in the announcement materials. It appeared that all those vendors had gone along with a vision that would have them all embed Intel processors and LCD displays and use the same interface software: Microsoft's WinPad kernel.

At Work never made it off the ground, for a variety of reasons. The extra hardware was quite expensive, Microsoft didn't deliver code on time (it takes a long time to develop a new OS), and WinPad dramatically reduced vendors' ability to differentiate themselves. The PDA market never took off. More importantly, At Work got into so many industries' bread-and-butter business that it scared them. Many of the companies that appeared to be participating at the announcement date had made little real commitment to the technology. They realized they were signing away their ability to control their future, so they signed off. At Work was a sign of Microsoft's hubris.

Now two complementary efforts -- Salutation and Novell's NEST -- have emerged with similar goals to Microsoft At Work but other approaches.

The Salutation Consortium, which had the working name "SmartOffice," incorporated this month under its new name. IBM Japan and five major Japanese office-machine manufacturers started it in 1994. The Salutation Specification that it hopes to produce by next October should provide a consistent way for printers, copiers, phones, faxes and other office devices to identify each other and communicate across networks and with personal and handheld computers. The group is wisely taking advantage of other related groups, including the Multi-Function Peripheral Association, the IrDA (infrared links), the Desktop Management Task Force and Versit. Kodak, Lexmark and Novell are members, and HP recently joined.

Novell Embedded Systems Technology (NEST) is Novell's effort to push its influence far beyond computers and file/print servers. Now Novell wants its software in devices ranging from the office gear just mentioned to set-top boxes, water meters, gaming machines and factory hardware. It has set lofty goals: one billion nodes connected.

Now Microsoft seems poised to set new standards with Windows 95, NT and related products and services that move well beyond the desktop computing environment and go into the enterprise and across the global networks with distributed software components, directory services, messaging, security, online services, payment systems, application scripting, transaction processing, telephony services and more.

The larger and more ambitious Microsoft gets, the more it arouses fear and loathing from its competitors, so they invent their own opposing standards or band together. But their feelings are mixed: Microsoft's presumed success makes it easier to make decisions and possibly to make money -- as long as Microsoft doesn't enter their backyard and eat their lunch first.

Ahem... that's our football

The problem is who gets to create and change the standards, which kicks up a series of thorny issues such as who owns the intellectual property, whether and on what terms others can license it, who can participate in affecting the standard and how those changes occur.

Openness, of course, is relative (see **Release 1.0**, 6-88, 11-88 and 11-89 for more on standards, earthquakes, openness and vaporware). To ensure that other companies have a say in what happens to its standards, Microsoft uses what it calls Open Process. It makes early confidential technology disclosures to developers and customers and gathers feedback from them. The process helps Microsoft collect requirements, test strategies and occasionally reset its priorities. Over time, Microsoft holds many design reviews so the other companies can see the progress to date and suggest changes. In the five years that Microsoft has been doing this, 800 companies have participated in over 70 major design reviews. Some technology areas take one or two reviews; other, more complicated ones such as OLE, may have several.

Nevertheless, if at any time Microsoft decides it must make some changes, everyone else has to follow -- unless they can convince or force Microsoft to do otherwise. Recently, Microsoft quietly made some modifications to MAPI, its Messaging API, in order to make it work better with Exchange, Microsoft's oft-delayed document- and message-replication server. This action breathed new life into the Common Mail Calls, an API set that the XAPIA developed to bridge MAPI and the now-inactive VIM offering from Lotus.

A DIFFERENT METHOD

For the past 25 years, in quiet corners of the technology industry, companies building the Internet have created a standards process that is different from the unilateral process we've just described and from the official process we're about to compare it to. Though it's easy to romanticize or idealize, the Internet version seems to combine the egalitarian nature of the *de jure* process with the speed and flexibility of the *de facto* approach. It's not perfect, but it's effective, and that effectiveness has attracted attention elsewhere as the Internet has begun to reach critical mass. Here are some of its characteristics.

The most noticeable one is that in practice, the Internet flips the official process upside-down. In the official model, senior representatives from the top companies in a particular market (say, high-speed data communications) gather around a table to design a specification, keeping in mind whom they represent and the products they already have in the market or under development. Their discussions are limited to non-confidential subjects, with input only from qualified standards bodies.

As a result, their designs take quite a while to hammer out; they are often overwrought (sometimes referred to as "wedding cake" standards); and they are often vague at higher levels in the protocol stack, as a way to open opportunities for the participants to differentiate their offerings. Not surprisingly, the products these companies create based on those protocols often fail to interoperate.

On the Internet, an individual has a clever idea and codes it. She then passes it to several friends and colleagues across the Internet and perhaps

posts it where other interested parties can get and use it. If it's not useful or viable, the idea may die there. Otherwise, users may offer suggestions or make modifications of their own. If the modified code is better and the original developer loses interest (or the grant, or tenure), someone else may become the center of activity. The author weighs the inputs and adopts what she perceives as the consensus route. If she misinterpreted the participants' wishes, she is likely to be flamed in e-mail.

IBM's Frank Dawson, a veteran of the standards process, expresses the pressure for change succinctly: "When you're in a market where product cycles are six to nine months, the four- and five-year ITU and ISO cycles don't cut it." In official and unofficial capacities, Dawson currently participates in the Document Management Association, the Electronic Messaging Association, Versit, XAPIA, the Salutation Consortium (see page 3) and the Workflow Management Coalition.

Eventually, several thousand people may be using the new protocol actively and multiple compliant applications may exist. At that point, whoever is in charge may propose the specification to the Internet Engineering Task Force (IETF) as a Request for Comments (RFC). Recently, the Internet Society created several types of RFC that are more official.

Internet processes can be problematic. Participants can be parochial and authors possessive. The process is more subject to the human frailties of the characters involved. Says IBM standards expert Frank Dawson, "Each of us adds to the culture of standardization. We bring our good stuff and our bad stuff."

Other differences

The Internet process leads to guidelines and recommendations rather than Standards. Most participants obey them because they benefit (as does everyone else), but the Net's standards aren't etched in stone. Their evolution is a given, and there's an implied invitation to take a crack at improving them.

In the traditional process, vendors are so focused on commercial products and financial gain that they charge each other for everything. On the Internet, many things are available for free or for low shareware fees, including versions of Unix, text editing tools, Web software and more.

Part of the fun of working on the Internet is that participants actively use the medium they are trying to develop. In a sense, the medium helps develop itself. For example, with mailing lists, gopher sites and the World Wide Web, people can disseminate specifications and sample code inexpensively. This may seem trivial, but a large problem with EDI standards has been the difficulty and expense of acquiring them. Recently, EDI-system vendor Premenos took it upon itself to put the standards on the Internet quietly (see **Release 1.0**, 1-95).

The Internet is not simply a nice place and way to develop standards; it is increasingly becoming the platform of choice for all sorts of services.

Many of its protocols have simply won, a fact that hasn't made its way around the industry yet. Optimistically, over the next five years half of US business will get LAN-connected, on-demand or full-time links to the Internet. This means that their employees will be able to use the Internet's tools at any time for negligible marginal cost.

Now that commerce is making its way onto the Internet, will that competition change the whole process? Maybe the software giveaways will stop, and vendors will retreat to the comfortable and more predictable process they had before. We don't think so. For one thing, the out-of-control nature of the Internet is likely out of Microsoft's control, too, and will force many open protocols on the Bellevue bunch that they would rather have designed themselves. For another, the shrink-wrapped, standalone software business is in trouble, anyway, and needs to be replaced.

It used to be that buyers treated the first full commercial release of a product as beta quality. Now the beta is released broadly, usually for free, and people treat it as the first release. The official 1.0 version is usually better as a result.

The birth of consortia

The relatively placid world of standards-setting was jolted in 1988, when Sun and AT&T joined forces to create their own "official" version of Unix. Other Unix vendors reacted by forming the Open Software Foundation (OSF; see **Release 1.0**, 6-88 and 11-88). These events introduced guerrilla warfare in an epoch that had been characterized by gentlemanly conflict in agonizing wars of attrition. Much has changed since then....

Now there's a thriving standards community, with innumerable associations, alliances, coalitions, committees, consortia, councils, foundations, initiatives, institutes, task forces and work groups. Their charters range from discussion to education, evangelism, unification, creation, coronation -- and Microsoft's overthrow. These groups form networks and food chains: A small industry group creates a protocol, gets folded into a larger group, which then proposes the standard to an international organization -- or to the IETF.

Overall, though, the groups are a mixed bag. Some are involved in hard work that should lead to better applications atop an ever-improving infrastructure. Others make it easy to be cynical. Too many of them start with companies reacting fearfully to Microsoft's influence -- present or impending -- on their market. Often a groups' stated intentions and goals don't match the tacit ones. Usually, a look at a group's founders or funders discloses its real agenda. Following is an informal taxonomy of motives, with a few examples (and a few names withheld to protect the guilty):

Innovate, collaborate and commercialize

- Fill gaps that are holding back a market (Versit).
- Promote interoperability to create/grow a market (EMA, DMA, OMG, Salutation).

- Foster integration of similar but disconnected offerings (ECTF).
- Capture new market opportunities (CommerceNet).
- Represent organizations in larger standards bodies (ANSI, TIA).
- Discuss, formulate and propose standards (various forums).
- Finish incomplete standards (ATM Forum, National ISDN-1).
- Foster commercialization of standards (IMTC, IrDA, PCWG).
- Act as hub of activity around a standard (W3C).
- Operate as government-authorized standard-setting monopoly (Bell Labs) or antitrust-exempt research organization (Bellcore).

Market and lobby

- Increase market awareness; pool marketing resources.
- Run expositions, trade shows and conferences.
- Lobby governments or other international organizations.
- Legitimize a market (PCWG).
- Push more products (trade associations).
- Marshal support for specific (sometimes troubled) protocols (Versit).

Fight, stall and survive

- Offer competition to a dominant player (OpenDoc, Versit).
- Rescue a standard run amuck (PC Card Association).
- Protect a market from invaders by raising barriers.
- Neutralize the competition.
- Stall the industry.
- Save the ship.

Sometimes the sands shift underfoot to create a situation that contradicts an organization's charter, making it no longer viable. That's what has happened to Bellcore. Created after AT&T's divestiture in 1984 as a central research and coordination resource for the Baby Bells, Bellcore began to wobble as regulations loosened in the early 1990's and the Bells were allowed to compete with each other. Now Bellcore's for sale.

COMING SOON

- *Links, filters and navigation.*
- *Authoring tools.*
- *Visualization of information.*
- *The economics of the Internet.*
- *The analog world.*
- *And much more... (If you know of any good examples of the categories listed above, please let us know.)*

Lock-in -- or get locked out

Market stability is desirable, but it's not always easy to achieve. The Global Business Network has recently focused on a concept called "lock-in." Standards can catalyze lock-in and create a stable pattern of behaviors and expectations that last quite some time: Users request the standard in their RFPs; vendors support the standard. But it's not just the standard that creates useful lock-in. A market may emerge only when several things happen simultaneously, such as the desktop publishing market that emerged when the Macintosh, laser printer, PostScript font and page-layout software packages came together. This kind of convergence of technologies and needs create long-term markets.

SQL, Group III fax, VHS and DOS are all good examples of technologies that created lock-in, usually after a period of struggle against competing standards. After lock-in, they led to substantial revenue streams for many companies.

Those cases are rare. There are many ways things can go awry.

No lock-in, or too many small ones. Standards can remain in flux too long, confusing buyers. For example, in the '80s and early '90s, modem and file-transfer protocols emerged from the data communications industry as quickly as companies could invent marginally superior ones (remember X-modem, Y-modem, Z-modem, Kermit, Blast and sundry others?). Faxing blew right past that market because its creators agreed on a single standard and met an aggressive price point. Other markets where standards haven't settled include simultaneous voice and data modems and HDTV.

Lock-in with an incomplete standard. To allow for product or service differentiation, many official standards don't define enough detail. ISDN is a good example: Early offerings didn't interoperate. Almost too late (when potential buyers were calling it Innovations Subscribers Don't Need), manufacturers and carriers agreed to a specification called National ISDN-1, which set basic interoperability. ISDN is now catching on. ATM proponents learned their lesson from ISDN's near failure and created the ATM Forum, which has succeeded in positioning ATM as the consensus next-generation communications technology worldwide.

Lock-in with a poorly designed standard. The ISO X.400 messaging standard was designed to work with the X.500 directory-services standard, which didn't make it to market in time. Users were never meant to see the dreadful X.400 addresses; now the Internet's @ sign has taken over. Early on, Prodigy's designers bet on NAPLPS, a mature graphics-display standard, which gave its service a childish interface that it is only now about to shed.

A VISIT TO THE FRONT LINES

The market for hybrid communications products and services, which includes desktop conferencing, voice processing and computer-telephone integration, is a good place to dig into the standards process. It is bleeding-edge enough that the marketing and evangelism are still evolving and promising enough that many companies have joined these organizations in order to see where it will go. A few of them, especially Intel and AT&T, are moving quite aggressively. Despite the youth of this market, these organizations have been around long enough that there are established relationships and animosities between them, which makes it all more interesting.

MULTI-PARTY CONFERENCING

Companies have been trying to kickstart the digital multimedia conferencing industry for years. They have faced many obstacles, including inefficient compression schemes, expensive and hard-to-get digital bandwidth, cumbersome point-to-point architectures and costly hardware, all of which led to unsatisfying user experiences and a slow-growth market.

Recently, the picture has improved, thanks in large measure to the efforts of some of the following six groups (not counting their ancestor organizations): MMTA, IMTC, PCWG, ECTF, MMCF and Versit. Welcome to Acronym Alley!

Until this year, the Multi-Media Telecommunications Association (**MMTA**) was the North American Telecommunications Association (NATA), which was formed by telephone equipment vendors to lobby the US Government to loosen restrictions on telecom manufacturing. That mission has in large part been accomplished. As NATA, the group did some work in computer-telephone integration (CTI) evangelism, and recently it has moved into multimedia communications, but it has not yet demonstrated any new purpose. It doesn't help that AT&T's presence outweighs most other member organizations. The MMTA's new president, Bill Moroney, will have his work cut out to set the Association on course with a credible mission that is distinctive from the other organizations described here. As president of the EMA, long an X.400 e-mail stronghold, he got the organization in gear at a time when online services and the Internet began their rush to market. If Moroney can't bring focus to the MMTA, it may end up a casualty, or part of another group.

In November, 1994, two similar conferencing associations (CATS and MCCOI) merged to form the International Multimedia Teleconferencing Consortium (**IMTC**). CATS focused on audioconferencing, MCCOI on video, so they were complementary. The combination seems to have worked well. IMTC now has 60 member companies, including Microsoft (an important member to have). DataBeam is a leader in the consortium, but it doesn't dominate. The group's Web site is quite useful and has pointers to information on many standards, standards bodies and more. IMTC's members are focused on speed-to-market. To get there, they have agreed on a "standards-first" approach based on the H.xxx and T.xxx series standards, which means that systems will at least use those protocols to announce and negotiate capabilities. The systems can then move to other, proprietary protocols as needed.

The Personal Conferencing Work Group (**PCWG**) started out pretty aggressively and has since rethought its process, message and goals. Intel created it in order to build a market for personal conferencing, specifically its ProShare

and Indeo products. The project is important to Intel, which has put many resources behind it. (After all, a skeptic might ask, what other kinds of applications will eat enough MIPS to sell P6s to corporate America?) Other companies balked at Intel's proprietary approach. As a result, Intel and the PCWG agreed to support a "standards first" approach based on the H.320 multiparty videoconferencing standard. The PCWG's new short-term priority is to demonstrate multipoint audio/video calls with shared whiteboards, running on heterogeneous platforms -- and built atop H.320.

Intel, ISDN hero

Intel's ProShare videoconferencing application requires ISDN, which is not easy to obtain in most places. Understanding that access was crucial to its sales, Intel did a super job of fixing a problem that belonged to the US local-exchange phone companies. Intel researched the status of ISDN deployment, figured out how to work with the phone companies and set up an ISDN hotline that is, in many cases, more useful than what the phone companies offer.

The Multi-Media Communications Forum (**MMCF**) takes a broad approach to multimedia architectures. It is complementary to the IMTC, although the MMCF also crosses into areas such as video-on-demand. In fact, when the IMTC was formed (from CATS and MCCOI), they discussed whether MMCF should be folded in, too. However, the IMTC's specific, fast-track focus on real-time conferencing helped the organizations decide to stay separate.

Dialogic has been able to do through the Enterprise Computer Telephony Forum (**ECTF**) what Intel still hasn't achieved with the PCWG: It has helped launch a credible group to take over an architecture that it developed, called SCSA. The ECTF, which is modeled after the ATM Forum, includes many important players such as DEC, Ericsson, Fujitsu, HP, Mitel and Northern Telecom. Even former enemies are joining, notably companies that backed a rival architecture called MVIP. Dialogic, an excellent marketing company, has shown restraint and flexibility its participation. The industry is benefiting.

Two years ago, the CTI and voice-processing markets were fragmented into several warring camps: TAPI vs. TSAPI; MVIP vs. SCSA. Northern Telecom and Intel created a protocol translation specification called Tmap that bridges the gap between TAPI, Microsoft's client-based telephony protocol, and TSAPI, Novell's server-based version. When it helped found the ECTF, Nortel turned over stewardship of Tmap to the organization. Overall, the ECTF seeks to be a neutral, umbrella organization where existing initiatives can thrive. It is also working to unify Internet and ITU/ISO standards. Increasingly, the ECTF is a place where companies can turn over intellectual assets in exchange for blanket licensing agreements and the potential of faster market growth.

Finally, there's **Versit**, the initiative announced in November, 1994, by Apple, AT&T, IBM and Siemens/Rolm -- sometimes called the "gang of four." Versit has a bit of an image problem. First off, it's a joint development initiative, not an open group as most of the others mentioned here are. The four founders figured they were big enough to guarantee a market for developers if they agreed on which specifications to support. They also couldn't reach any agreement with Microsoft and Intel.

This didn't sit well with the media, which saw Versit as an anti-Microsoft group. While it's good to have major vendors agree to support standards and work toward interoperability, especially if they think pretty broadly about what's wrong with the communication infrastructure, it appeared the group had bitten off more than it could chew.

Like the PCWG, Versit has gone through a change of attitude. Versit is now more of an activist organization, reaching out to other forums to offer technology or participate in firming up standards. The individual Versit companies will probably become ECTF members within the next month. They are also talking to many other groups to see how they can work together. One of our favorite initiatives is Versit's electronic calling-card specification, described below.

Culture shock

Versit's member companies have extremely strong corporate cultures. The team of people they put into Versit has had the remarkable task of cycling between meeting with their Versit counterparts and selling those ideas inside their companies. Sometimes it must seem like shock therapy. Siemens/Rolm's Thomas Schwarcz says, "Pretty soon you get to the place where you have to start opening up your protected areas.... Nothing is more difficult than going to your company and trying to convince them to give up patent protection."

This highlights a benefit of all this consorting and allying: Companies are occasionally shocked and shaken into looser stances. They learn to collaborate more effectively, to hang onto their intellectual property less. The era of standalone systems is past. It's only going to get worse for isolationists as the Internet collapses distances. Companies can either fight the trend or go with it.

Release 1.5: PDI lives!

In **Release 1.0**, 9-93 we described Personal Data Interchange, a simple way to exchange business card and other information any time you connect electronically with someone else. This electronic calling card could be left in voicemail, sent over modems and exchanged between any computers or PDAs over an infrared link. It would accompany your e-mail messages and make it easier to reply in a different medium. If you've ever counted the minutes you spend jotting names and numbers from your voicemail or dictating them to other machines or people, you'll appreciate the time this could save.

Now the Versit group has proposed a spec for such a card. The Versitcard has two basic formats: a simplegram and a Bentogram (Bento is the name of Apple's compound-document format, now part of OpenDoc). The simplegram is intended for exchanging information with small, low-memory machines such as pocket organizers. It includes only the most essential information. The full Bentogram contains more information, including a spot for an (optional) logo, public encryption key and Web address. Imagine: Your virtual business card could have a button on it that reads, "For more information about me, click here." One click would take anyone reading it to your Web site.

Finding the right social dynamics or reward mechanisms will help the Versitcard gain broad use. One way is to treat people who identify themselves

with an electronic card preferentially. For example, our voicemail message might say, "Please leave a message. If you have an electronic calling card, leave it after your message; I will try to return your call first." Being helpful to me by providing automated contact information earns you an expedited reply.

RIP, Caller ID

Forget Caller ID. It can't do what a Versitcard can do. It's a nice idea with a miserable implementation and will eventually fail. Why? Call someone from a random phone and they get erroneous information (whatever number belongs to the phone you used, not your number). Call from behind a trunked system such as a PBX and the ID information is not likely to pass through. Never mind that Caller ID is regulated differently all across the US, which means consumers will never figure out quite how to handle it and software interfaces will never drive it properly. Even if it works, once you receive Caller ID, you still don't know who's calling. Only call centers have the money, technology and patience to do database lookups every time the phone rings.

The phone system had its chance to fix the problem of identifying callers. Now this function should go off the network and into software-based devices that connect through various networks. It should also be voluntary.

Two more wishes

A perfect companion to a Versitcard would be a software component that could identify and parse addresses. The module could be active most of the time, watching for address information in e-mail messages, business letters, Web pages and other data streams. When it finds some, it could interpret them as well as possible, present them for correction and approval, then insert them in the user's favorite PIM or database.

As long as people are exchanging personal information easily, why not event information? A standard calendar-event exchange format would allow people to drag movie schedules and theater performance information directly into their calendars. Contact information could be in an enclosed Versitcard, only a click away. To get this event specification done, calendaring and scheduling companies need to stop protecting their turf inside corporations and agree on standards for open interchange. It would open new consumer markets for all of them.

An open question: document and application sharing

Despite all of the conferencing efforts described above, the problem of remote application sharing persists. Today, conferencing tools offer a few, marginally satisfying ways to collaborate. Users can (1) paste data or screen shots to a notebook-like pad, which transmits them. Participants can then use color-coded drawing and typing tools to work on the graphic with each other, but they are not affecting the original document or using their favorite applications. (2) Take over the remote screen entirely, or (3) run applications remotely, as long as they are on the same kind of computer.

Few group conferencing applications do better, and practically none work with multiple simultaneous participants. The multi-site videoconference works, usually, but shared documents don't.

As currently defined, the T.120 specification doesn't help much. It offers only file and still-image transfer between heterogeneous computers. Everything else, including application or document sharing, is done via extensions that lead to proprietary protocols.

T.120 does work over TCP/IP, which means it can describe application-sharing systems that work on the Internet. As client/server computing and communications protocols are reinvented over the next decade, people will discover new ways to share applications. For now, though, consortia and forums aren't helping to clarify application sharing, and standards bodies are steering clear of it, too. Part of the problem is that different operating systems have different interface approaches, including the number of mouse buttons, how things activate as the user browses, etc. The problem is multiplied with multipoint topologies.

Net effects

Groupware and conferencing are going to get a great boost from the Net. Originally, each party wanting to collaborate with data had to connect all the parts, mess with the address book, then log in and synchronize with a remote party for each collaboration event. Imagine instead a full-time connection, a pipe that's open all the time at negligible marginal cost.

Instead of a ProShare session, imagine several CU-SeeMe video feeds combined with multi-party chat over the Net. Or participants could use Ubique's Virtual Places system, which combines the Web, Internet Phone and multi-party chat to offer a different experience (see **Release 1.0**, 6-95 and 2-95).

Most of the vendors in this market are working toward H.320 and T.120, which means they will be slow to note these possibilities. Their focus on time-to-market makes them not see the impending tsunami, or the real problems with today's architectures. The Internet may well become the medium of choice, with other networks that offer specific capacity and grades of service available at extra cost. But most of the standards that these companies and organizations have focused on don't support the Internet. Their members are beginning to take note, but much of the shifting of priorities hasn't happened yet.

Meanwhile, people are working to enhance the Internet. Two examples that may one day enhance multiparty conferencing are the Real-time Transport Protocol (RVP) and the ReSerVation Protocol (yes, RSVP), which Xerox PARC, MIT and USC are collaborating on.

THE BUSINESS CASE: OPPORTUNITIES IN CENSORSHIP
by Esther Dyson

> *"The Net treats censorship as damage, and routes around it."*
> *-- John Gilmore, director, Electronic Frontier Foundation*

Let's take the obvious position, that government censorship is bad, and move on from there. Censorship is not bad because all images are equal, or because all points of view are valid or equally appealing. It's not the *function* of censorship -- selecting good stuff, avoiding bad stuff -- that is bad but the assignment of the power to make those judgments to an all-powerful government.

Censorship is bad because informed adults should be free to make such judgements for themselves -- or at least to appoint someone directly to make those judgments for them. (Indeed, every time you read **Release 1.0** you are appointing someone to make those judgments for you. But the ability to select is different from the ability to block; **Release 1.0** does not prevent you from hearing other points of view from other sources. Censorship does.)

Indeed, the very success of the Internet and of online services will create a huge market for censorship -- but for censorship by a variety of diverse rating organizations, acting on behalf of customers who ask for and will even be willing to pay for such services.

While the Exon amendment to the telecom deregulation bill wants to make the entire world of the Internet "safe for children," leaving adults with nowhere to go and no other choices, the market wants to sell a variety of *different* worlds with different standards to requesting adults. Government censorship is a mass-market approach; filtering services are the kind of one-to-one marketing approach that everyone is now talking about -- and that technology is now making possible.

The alternative approaches are a variety of filtering techniques and services. Underlying them are technical standards such as the one forthcoming from IHPEG (Information Highway Parental Empowerment Group), a consortium led by Microsoft, Netscape and Progressive Networks. (PN's founder and ceo is Rob Glaser, formerly with Microsoft, and a director of the EFF.)

IHPEG is *not* a content standard; it's a technical standard that will allow any browser to interpret and act upon ratings published by a third party using the standard's format. That lets any user use any rater's ratings -- for an agreed-on price. The existence of such systems will foster a lively market in ratings services -- not just for porn and violence or cleanliness and peacefulness, but for other characteristics such as topic areas, national language or even quality.

Lenses as well as filters

In principle, any user can choose his own ratings providers and decide how to combine and use their ratings: for example, exclude all items rated "violent" by service A, *and* point from my child's home page to any items rated "excellent; category: animal movies" by service B. Local communities

could set up their own rating service for local news items and articles by local self-publishers; PTAs could share ratings with PTAs elsewhere; the possibilities are endless. People with good judgment -- or time on their hands -- will be able to sell their judgments to harried parents with no time, or their expertise in a topic area to others interested in that field.

The point is that each person or parent is free to choose *whose* judgment to rely on. Of course the system won't be perfect as a parental censor for kids: Bad things will slip by; good things will be bypassed (however you define "good" and "bad"). But life isn't perfect either, and people manage. Children probably should be exposed to a little seaminess before they go out into the world on their own; most parents will want to make sure that they know enough to find disgusting what is disgusting and tragic what is tragic. (The problem is constant exposure that desensitizes, rather than the odd glimpse that provides knowledge.)

One man's mania -- another man's market

In cyberspace it's actually easier for individuals or families to control what they see or hear than in the physical world. In the physical world, you are both stuck in the community you live in and restricted to a small set of mass media -- a few television channels, a few more cable channels, a couple of local newspapers and a couple of national ones. You can seek out special-interest publications, sure, but it may be hard to get in touch with fellow subscribers.

Of course, the function of finding or avoiding certain topics or people is one person's challenge -- and a supplier's opportunity. It is technically possible to screen out or bring in almost anything. The only thing that's lacking is people to do the actual decision-making -- to read the items, look at the pictures, and decide what fits whose tastes. (Of course, services can rate themselves, but most people will want and pay for objective third-party ratings. Ratings may differ from one content-supplier to another, or even be misleading.)

In the end, that's not a job for software, which can identify topics but not quality -- and can't really judge the impact of an image. Is it a man on a couch -- or a dead body? Is it a Madonna -- or is it Madonna? (Even art critics might disagree -- but the room for disagreement is much smaller than with software or textual descriptions.)

So the next big job category on the net is likely to be content-rater, and the next big business is rating service. The hottest topic right now is rating stuff as suitable or unsuitable for children -- and in a free market, there are lots of different opinions on that. In short order, there will be a profusion of different services targeted at different audiences -- Christian fundamentalists, pacifists, and special-interest services focused on topic areas such as music, French pen-pals (remember those from the days when children wrote letters?), homework help lines and the like. Parents may subscribe to one, which limits children's access to clean Net sites, and to others which actively select content focused on specific areas.

With the profusion of information on online services, much of the action will be in choosing information rather than producing it.

A market for governance and judgment

From a market perspective, the excitement is the breadth of opportunities for new net-based services. From the social/civil liberties perspective, the excitement is the opportunity to try a little bit of natural selection -- also known as "the free market" -- on rules of governance. Each online community will have its own rules. Those with good, functional rules will grow and prosper; those with dysfunctional rules will lose their members and die. In real life, people are stuck where they were born -- either by economics or in some places, such as Cuba, by a repressive government (and the cost and unwillingness of other nations to let them in). But cyberspace communities are fairly cheap to establish. Many of their "governors" (or moderators) are volunteers; others are employees of commercial services provided and financially owned by a third party but often controlled by their members.

In cyberspace the consent of the governed in each community is vital, since people can leave it if they don't like it. On the other hand, rules in cyberspace have more moral authority than on earth, since the unwilling minority can simply leave. The only time terrestrial authorities need to step in is when one community injures another -- whether it's luring in new members by false advertising, posting libelous messages or breaching copyrights, or simply sending out unsolicited messages to unwilling recipients.

The solution to the problem of porn on the net is not government legislation -- nor is it government action to foster rating services. If those guys in Washington can just sit tight, the natural forces of the market will take care of it almost faster than a bill can pass through Congress.

(The essay above appeared in slightly different form in the Boston Globe on July 12.)

A personal note from Esther:

I have recently become the chairman of the Electronic Frontier Foundation. I joined the board in 1991 at the request of founder Mitch Kapor, a move I described in Release 1.0, 6-91. The Foundation has since been through a number of stages, most recently a detour through Washington, D.C. But in the end, the soul of the EFF comes from the computer industry. Our "policy" (read "lobbying") arm split off to form another group, and we decided to move our physical headquarters to California. Our mission is what it has always been: promoting civil liberties and decentralized self-governance on the net. Because this is a democracy, we believe we can best carry it out through our core constituency, the computer industry worldwide. We will continue to be active in Washington, and I personally work as a member of the National Information Infrastructure Advisory Council, as co-chair of its intellectual property and privacy subcommittee.

We represent ideas, not interests. If you'd like to know more about the EFF, please e-mail me at <edyson@eff.org>. Or e-mail our new executive director, Lori Fena, at <lori@eff.org>. She comes to the Foundation from Stream/Corporate Software. Before that, in 1993, she co-founded Tech Board of Trade, which she sold to Corporate Software in 1994 -- as a result of being a speaker and meeting Mort Rosenthal at the 1994 PC Forum!

RESOURCES & PHONE NUMBERS

Roland Alden, (415) 296-9106; fax, (415) 345-9833; 2422200@mcimail.com
Christine Traut, **Arthur Andersen & Co., SC**, (312) 507-3649; fax, (312) 507-1003; ctraut@aol.com
Judy Kilpatrick, **Association for Information and Image Management** (AIIM), (301) 587-8202; fax, (301) 587-2711
Larry Jacobs, **AT&T GBCS**, (908) 953-8605; fax, (908) 953-2486; jacobs@attmail.com
Jed Harris, **CI Labs**, (408) 864-0310; fax, (408) 864-0380; jed@cilabs.org
CJ (Neil) Starkey, **DataBeam**, (606) 245-3500; fax, (606) 245-3528; nstarkey@databeam.com
John Landau, **Dialogic**, (201) 993-3000 x6427; fax, (201) 631-8593; j.landau@dialogic.com
William Moroney, **Electronic Messaging Association** (EMA), (703) 524-5550; fax, (703) 524-5558; bmoroney@ema.org
Frank Dawson, **IBM**, (817) 962-5052; fax, (817) 962-6730; fdawson@vnet.ibm.com
Robert Pascoe, **IBM** (Salutation), (817) 962-3146; fax, (817) 962-4063; rpascoe@vnet.ibm.com
Scott Richardson, **Intel**, (503) 264-8370; fax, (503) 264-6217; scott_g_richardson@ccm.jf.intel.com
Tony Rutkowski, **Internet Society**, (703) 648-9888; amr@isoc.org
Tony Bawcutt, **Microsoft**, (206) 936-7611; fax, (206) 936-7329; tonyba@microsoft.com
Tom Zenisek, **Northern Telecom** (ECTF), (615) 734-4481; fax, (615) 734-5116; tom.zenisek.0192047@nt.com
Tom Schwarcz, **Siemens/Rolm** (Versit), (408) 492-3155; fax, (408) 492-2183; schwarcz@netcom.com

---

Release 1.0 is published monthly, except for this combined July/August issue, by EDventure Holdings, 104 Fifth Ave., New York, NY 10011-6901; (212) 924-8800; fax, (212) 924-0240. It covers PCs, software, the Internet, computer-telephone integration, online services, groupware, text management, connectivity, messaging, wireless communications, artificial intelligence, intellectual property law and other unpredictable topics. Editor: Esther Dyson (edyson@eff.org); publisher: Daphne Kis (daphne@edventure.com); managing editor: Jerry Michalski (spiff@panix.com); circulation & fulfillment manager: Robyn Sturm (robyn@edventure.com); executive assistant: Catherine Tymkiw; editorial & marketing communications consultant: William M. Kutik (kutik@edventure.com). *Copyright 1995, EDventure Holdings Inc. All rights reserved. No material in this publication may be reproduced without written permission; however, we gladly arrange for reprints or bulk purchases.* *Subscriptions cost $595 per year, $650 overseas.*

CONSORTIA, STANDARDS BODIES AND OTHER LIFE FORMS MENTIONED

Acronym/Name	Full Name (and Web site)
ABM	Anyone But Microsoft
ACM	Association for Computing Machinery (www.acm.org)
ACTAS	Alliance of Computer-based Telephony App. Suppliers (part of MMTA)
AIIM	Association for Information and Image Management
ANSI	American National Standards Institute (www.ansi.org)
ATIS	Alliance for Telecommunication Industry Solutions
ATM Forum	Asynchronous Transfer Mode Forum (www.atmforum.com/atmforum/home.html)
ATSC	Advanced Television Systems Committee (www.atsc.org)
Bellcore	(www.bellcore.com)
Black Forest Group	Euro-centric customer group
BTA	Business Technology Association (was NOMDA/LANDA)
CATS	Consortium for Audiographic Teleconferencing Standards (now IMTC)
CCITT	Consultative Committee for International Telephony and Telegraphy (now ITU)
CI Labs	Component Integration Labs (www.cilabs.org)
CommerceNet	(www.commerce.net)
DAVIC	Digital Audio/VIdeo Council
DISA	Data Interchange Standards Association (www.disa.org)
DMA	Document Management Alliance (part of AIIM)
DMTF	Desktop Management Task Force
ECMA	European Computer Manufacturers Association
ECTF	Enterprise Computer Telephony Forum
EMA	Electronic Messaging Association (www.ema.org)
ETSI	European Telecommunications Standards Institute
FSF	Free Software Foundation
IEEE	Institute of Electrical and Electronic Engineers (www.ieee.org)
IETF	Internet Engineering Task Force (www.ietf.cnri.reston.va.us/home.html)
IFIP	International Federation for Information Processing (www.dit.upm.es/~cdk/ifip.html)
IHPEG	Information Highway Parental Empowerment Group (www.realaudio.com/contentp/rabest/IHPEG.html)
IILC	Information Industry Liaison Comittee (part of ATIS)
IMA	Interactive Multimedia Association (www.ima.org)
IMC	International Management Congress
IMTC	International Multimedia Teleconferencing Consortium (www.csn.net/imtc/)
Internet Society	(www.isoc.org)
IrDA	Infrared Data Association
ISA	Interactive Services Association (http://policy.net/isa/)
ISO/IEC	International Standards Organization International and the International Electro-Technical Commission (www.iso.ch)
ISODE Consortium	X.500 directories (www.isode.com/overview.html)
ITU	International Telecommunications Union (www.itu.ch)
MCCOI	Multimedia Communications Community of Interest (now IMTC)
MFPA	Multi-Function Peripheral Association
MMCF	Multi-Media Communications Forum
MMTA	Multi-Media Telecommunications Association
MVIP	Multi-Vendor Integration Protocol
NIST	National Institute of Standards and Technology (www.nist.gov)
NMAA	National Multimedia Association of America (www.nmaa.org)
NTIA	National Telecommunications and Information Association (www.ntia.doc.gov)
ODMA	Open Document Management Association
OMG	Object Management Group (www.omg.org)
OSF	Open Software Foundation (www.osf.org)
PC Card Association	(formerly the PCMCIA)
PCCA	Portable Computer and Communications Association

CONSORTIA (CONTINUED)

Acronym/Name	Full Name (and Web site)
PCMCIA	Personal Computer Memory Card International Association (now PC Card Assn.)
PCWG	Personal Conferencing Work Group (www.gopcwg.org/pcwg/)
Salutation	(initially SmartOffice)
SGML/Open	(www.sgmlopen.org)
SPA	Software Publishers Association (www.spa.org)
TIA	Telecommunications Industry Association
UN/EDIFACT	Electronic Data Interchange For Administration, Commerce and Transport (www.premenos.com/unedifact/)
Versit	Apple, AT&T, IBM and Siemens/Rolm (www.versit.com)
W3C	World Wide Web Consortium (www.w3.org/hypertext/WWW/Consortium/)
WfMC	Workflow Management Coalition
XAPIA	X.400 API Association (ftp://nemo.ncsl.nist.gov/pub/oiw/dssig/xapia/)

STANDARDS MENTIONED

Acronym/Name	Full Name (and owning or coordinating body)
AMIS	Audio Messaging Interchange Specification
ATM	Asynchronous Transfer Mode
Bento	(part of OpenDoc, from Apple)
CDA	Compound Document Architecture (DEC)
CLASS	Custom Local Area Signaling Services
CMC	Common Mail Calls (XAPIA)
COM	Component Object Model (Microsoft)
CORBA	Common Object Request Broker Architecture (OMG)
CSTA	Computer Switch Telephony Applications (ECMA)
DCE	Distributed Computing Environment (OMG)
DSSSL, DSSSL Lite	Document Style Semantics and Specification Language
DSVD	Digital Simultaneous Voice and Data
EISA	Extended Industry Standard Architecture PC bus
FIPS	Federal Information Processing Standard (NIST)
FireWire	(Apple implementation of IEEE standard)
GIF	Graphics Interchange Format (CompuServe)
Group III	Fax standard. (ITU-T)
GSM	Groupe Speciale Mobile (ITU-T)
H.320	Multi-party videoconferencing specification (ITU-T)
HDTV	High-Definition TV (ATSC)
HTML	HyperText Markup Language (W3C, IETF, Netscape)
HTTP	HyperText Transfer Protocol (W3C, IETF, Netscape)
IPng	Internet Protocol, next generation (IETF)
ISDN	Integrated Services Digital Network (ITU-T)
JPEG	Joint Photographic Experts Group (ISO)
MAPI	Messaging API (Microsoft)
MIB	Management Information Base (IETF)
MicroChannel PS/2 bus	(IBM)
MIME	Multipurpose Internet Mail Extensions (IETF)
Motif	(OSF)
MPC (and 2)	Multimedia PC (SPA)
MPEG	Moving Picture Experts Group (ISO)
NAPLPS	North American Presentation Level Protocol Syntax (ANSI)
OCPS	Open Content Publisher Standard (Individual, Inc.)

STANDARDS (CONTINUED)

Acronym/Name	Full Name (and owning or coordinating body)
OCX	OLE 2.0 Custom Control (Microsoft)
ODA	Open Document Architecture (previously Office Document Architecture)
ODBC	Open Database Connectivity (Microsoft)
OLAP	On-Line Analytic Processing
OLE	Object Linking and Embedding (Microsoft)
OpenDoc	Component software technology (CI Labs)
OSA	Open Scripting Architecture (OpenDoc, from Apple)
PCI	Peripheral Component Interface (Intel)
PDF	Portable Document Format (Adobe)
PDI	Personal Data Interchange (Versit)
PEB	PE Bus (Dialogic), succeeded by SCSA
Plug and Play	(Intel, Microsoft)
POP	Post Office Protocol (IETF)
RFCs	Request For Comments (IETF)
RSVP	ReSerVation Protocol (IETF)
RTF	Rich Text Format
RTP	Real-time Transport Protocol (IETF)
SCAI	Switch-Computer Application Interface (AT&T)
SCSA	Signal Computing System Architecture (Dialogic)
SCSI	Small Computer Systems Interface
SGML	Standard Generalized Markup Language (SGML/Open)
SHTTP	Secure HTTP (Terisa)
SIR	Serial Infrared (HP)
SMTP	Simple Message Transfer Protocol (IETF)
SNMP	Simple Network Management Protocol (IETF)
SOM	System Object Model (OpenDoc, from IBM)
SONET	Synchronous Optical Network
SQL	Structured Query Language (IBM)
SSL	Secure Sockets Layer (Netscape, Terisa)
T.120	Document and still image sharing (ITU)
TAPI	Telephony API (Microsoft/Intel)
TCP/IP	Transmission Control Protocol/Internet Protocol (IETF)
TIFF	Tagged Image File Format (Aldus)
Tmap	TAPI_TSAPI Mapping Software (ECTF)
TSAPI	Telephony Services API (Novell)
URL	Universal Resource Locator (IETF)
USB	Universal Serial Bus (Intel)
VBX	Visual Basic Control (Microsoft)
Versitcard	Personal data interchange spec (Versit)
VIM	Vendor-Independent Messaging (Lotus; now idle)
VoiceView	(Radish Communications)
VRML	Virtual Reality Modeling Language
X11	Windowing system (X/Open)
X.400	Messaging specification family (ISO)
X.500	Directory-services specification family (ISO)
Z39.50	Remote information retrieval protocol (ANSI, IETF)

RELEASE 1.0 CALENDAR

August 1-2 **Net Profits: Doing Business on the Internet** - San Francisco. Produced by Layne Kaplan. Keynote by Intuit's Scott Cook, sessions with Donna Hoffman and Jim Bidzos. Call Layne Kaplan at (415) 373-0360; fax, (415) 340-9292; layne@lke.com.

August 2 **Business Technology Expo '95** - Las Vegas, NV. Sponsored by BIS Strategic Decisions. Call Scott Washburn at (800) 874-9980; fax, (617) 878-6650.

August 2-4 **Virtual Reality and Persons With Disabilities** - San Francisco. Sponsored by the Center on Disabilities. Call Dee Heller at (818) 885-2578; fax, (818) 885-4929; ltm@csun.edu.

August 3-4 **Interactive Television Conference 1995** - Los Angeles. Sponsored by Time Warner Cable, AT&T Network Systems and Silicon Graphics. Call (800) 621-3090; fax, (408) 777-9610.

August 7-9 **Web World Conference** - Chicago. Sponsored by DCI. EITers Jay Weber and Marty Tenenbaum say where the Web is going. Call Melissa Stewart at (508) 470-3880; fax, (508) 470-0526; DCIconf1@aol.com.

August 13-15 **Workflow '95** - San Jose, California. Sponsored by XSoft, IBM, ViewStar and others. Call Ronni T. Marshak at (602) 443-4090; fax, (602) 443-4094.

August 13-16 **Conference on Organizational Computing Systems (COOCS '95)** - Milpitas, California. Sponsored by ACM SIGOIS. Call Nora Comstock at (512) 928-8780; fax, (512) 928-8780.

August 13-17 **Object World San Francisco** - San Francisco. Sponsored and produced by OMG, Computerworld and IDG. Call Didi Muranne at (508) 879-6700; fax, (508) 872-8237; omg@omg.org.

August 14-18 **Computers in Context: Joining Forces in Design** - Aarhus, Denmark. Call Kaj Gronbak, 45 (8) 942-3237; fax, 45 (8) 942-3255; kgronbak@daimi.aau.dk; http://www.daimi.aau.dk/kgronbak.tj

August 15-18 **Groupware '95** - San Jose, California. Sponsored by Microsoft, Lotus, Collabra and others. Call David Coleman at (602) 443-4090; fax, (602) 443-4094.

August 16-19 **AI-ED '95: 7th World Conference on Artificial Intelligence in Education** - Washington, DC. Sponsor: Association for the Advancement of Computing in Education. Call Gary Marks, (804) 973-3987; fax, (804) 978-7449; aace@virginia.edu.

August 16-20 **ONE BBSCON** - Tampa, FL. Organized by ONE, Inc. Where BBSers go F2F IRL. To register, call Kathy Thrushkill, (303) 693-5253; fax, (303) 693-5518.

August 19-23 **Telecommunities '95** - Victoria, BC, Canada. Organized by University of Victoria, Division of Continuing Studies. Call Pat McGuire (604) 721-8746; fax, (604) 721-8774; mcguire@postoffice.uvic.ca.

August 19-25 **International Joint Conference on AI** - Montreal. Sponsors: International Association for AI, AAAI and the Canadian Society for Computational Studies of Intelligence. Call Carol McKenna-Hamilton, (415) 328-3123; fax, (415) 321-4457.

August 21-23	**OSF DCE User & Developer Conference** - Boston. Sponsored by OSF. Call Susie West, (800) 767-2336; fax, (508) 470-0526; http://www.DCIexpo.com/.
August 23-25	**DIS '95 Symposium** - Ann Arbor. Symposium on Designing Interactive Systems. Sponsored by ACM SIGCHI. Call Sue Schuon, (313) 747-3110; fax, (313) 936-3168.
August 23-25	**Interactive Multimedia '95** - Arlington, VA. Sponsored by the Society for Applied Learning Technology. From learning systems to twitch games. Call Raymond Fox at (800) 457-6812 or (703) 347-0055; fax, (703) 349-3169.
Aug 29 - Sep 1	**Windows Solutions '95** - San Francisco. Sponsored by Microsoft, Symantec and Softbank. The Win95 wave should crest here. Call (800) 488-2883; fax, (415) 525-0199; http://www.sbexpos.com.
September 7-8	**InfoWarCon** - Arlington, VA. Sponsored by the National Computer Security Association, Open Source Solutions and Inter.Pact. Call Paul Gates, (717) 258-1816 x202; fax, (717) 243-8642.
September 7-8	**Online Publishing Strategies for Magazines- '95** - New York City. Organized by AIC Conferences. Publish online or perish? Call Trina Johnston, (800) 409-4242; fax, (212) 248-7374.
September 11-12	**Quantitative Techniques in Direct Marketing** - New York City. Organized by Information Management Network. Call Lori Medlen at (212) 293-7300; fax, (212) 293-7676.
September 11-15	**ECSCW '95** - Stockholm. Sponsor: Foundation for Cooperative Work Technology. Call Yngve Sundblad, 46 (8) 102-477; fax, 46 (8) 790-6280; ecscw95@kth.se.
September 11-15	**Information Superhighway Summit** - Santa Clara. Produced by IDG World Expo. To register call (800) 225-4698 or (508) 879-6700; fax, (508) 872-8237; comnet@idgwec.com or http://www.idgwec.com. Questions? Ask for Marli Hoyt.
Septemer 11-15	**Networld + Interop** - Paris, France. Sponsor: Seybold Seminars. Call Cristi Leer, (415) 578-6985 or (800) 488-2883; fax, (415) 525-0183.
September 12-13	**@Networked Economy Conference** - Washington, DC. Organized by CMP. Newt Gingrich is scheduled to speak, along with Bob Allen, Gerald Levin, Steve Case and Bert Roberts. Call Jonathan Varman, (516) 562-7434; fax, (516) 562-7830; jvarman@cmp.com.
September 12-14	**Networks Expo '95** - Dallas. Organized by Bruno Blenheim. Call Annie Scully, (800) 829-3976 or (201) 346-1400; fax, (201) 346-1532.
September 14-15	**Advanced Technologies for Trading & Asset Management** - New York City. Sponsored by IBC, Global Investment Technology, AI in Finance. Call Jill Blasi, (508) 481-6400; fax, (508) 481-7911.
September 18-22	**Video Image World** - New York City. Sponsored by AV Video and Multimedia Producer Magazines. Call Sheila Alper, (800) 800-5474 or (914) 328-9157; fax, (914) 328-2020.
September 19-21	**@Unix Expo** - New York City. Organized by Bruno Blenheim. Call Annie Scully, (800) 829-3976 or (201) 346-1400; fax, (201) 346-1532.
September 20-22	**Virus Bulletin International Conference** - Boston. Sponsored by the Virus Bulletin. For registration call (203) 431-8720; fax, (203) 431-8165. For further information call Petra Duffield at 44 (1235) 555-139; fax, 44 (1235) 559-935.

September 25-28	**Interactive Television Conference and Expo** - San Jose, CA. Produced by Multichannel CommPerspectives and Microware. In case you still believe in ITV. Call Gary, (303) 393-7449 x225; fax, (303) 329-3453.
September 25-29	**Networld + Interop** - Atlanta. Sponsor: Seybold Seminars. Call Cristi Leer, (415) 578-6985 or (800) 488-2883; fax, (415) 525-0183.
September 26-30	**SPA Annual Conference** - Boston. Sponsored by the Software Publishers Association. Call Nadia Kader, (202) 452-1600 x339; fax, (202) 785-3649; nkader@spa.org.
September 27-29	**The Media Alliances Conference** - La Jolla, CA. Sponsored by The Kelsey Group. Come understand who's doing deals with whom. Call Natalie Kaye, (609) 921-7200; fax, (609) 921-2112.
September 27-29	**Electronic Commerce and Payment Conference** - New York City. Organized by the White Papers. Call George White at (201) 746-5456; fax, (201) 746-5886.
September 27-29	**Commercial Parallel Processing Conference** - Chicago. Organized by CMP Publications, Inc. and the Gartner Group. Use both sides of your brain! Call Jonathan Varman, (800) 808-3976 x6827 or (516) 733-6770; fax, (516) 733-6730; confreg@cmp.com.
September 27-29	**National Directory Conference** - New York City. Sponsored by MCC Electronic Publishing Group. Call Michael Hayes, (203) 834-0033 x151; fax, (203) 834-1771; simba@aol.com.
September 28-29	**Integrated Office Conference '95** - Del Mar, CA. Organized by the Multi-Function Peripheral Association. For registration questions call (800) 603-6372; fax, (619) 447-6872; e-mail mfpa-request@cognisys.com with the subject "Send IOC 95 Info". Other questions, call Bob McComiskie (617) 229-7021.
Sept 28-Oct 1	**PC Expo Home** - New York City. Organized by Bruno Blenheim. Call Annie Scully, (800) 829-3976 or (201) 346-1400; fax, (201) 346-1532.
Sept 31-Oct 3	***@Agenda 96** - Scottsdale. Sponsor: InfoWorld Editorial Products. Stewart's look ahead. Call Lia Lorenzano, (415) 312-0545; fax, (415) 286-2750.
October 3-5	**PC Expo** - Chicago. Organized by Bruno Blenheim. Call Annie Scully, (800) 829-3976 or (201) 346-1400; fax, (201) 346-1532.
October 8-10	***EuroChannels** - Paris. Sponsored by Global Touch, Ingram Micro, Merisel and Computer 2000. Call Josiane Emorine (510) 649-1100 x14; fax, (510) 649-1155; globaltouch2@mcimail.com.

1996

March 17-20	****PC (Platforms for Communication) Forum** - Tucson, AZ. Sponsored by us: You read the newsletter; now meet the players. Call Daphne Kis, (212) 924-8800; fax, (212) 924-0240; daphne@edventure.com.

** Events Esther plans to attend.*
@ Events Jerry plans to attend.

Lack of a symbol is no indication of lack of merit.
Please let us know about other events we should include. -- Catherine Tymkiw

RELEASE 1.0

SUBSCRIPTION FORM

Please enter my subscription to **Release 1.0** at the rate of $595 per year in the U.S. and Canada. Overseas subscriptions are $650, airmail postage included. Payment must be enclosed. Multiple-copy rates available on request. Satisfaction guaranteed or your money back.

Name _____

Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Telephone _____

❑ Check enclosed.

❑ Charge my

❑ American Express ❑ MasterCard ❑ Visa

Card Number _____ Expiration Date _____

Name on Card _____ Signature _____

7-8 95

❑ Please send me information on your multiple-copy rate.

Please fill in the information above and send to:

EDVENTURE HOLDINGS INC.
104 FIFTH AVENUE, 20TH FLOOR
NEW YORK, NY 10011

If you have any questions, please call us at 1 (212) 924-8800;
Fax 1 (212) 924-0240; e-mail info@edventure.com.

Daphne Kis
Publisher